

REMARKS

Reconsideration of the above-identified application is respectfully requested.

Claims 6-20 have been rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and claim the subject matter which Applicant regards as the invention. The Examiner stated that the claims are generally narrative, indefinite and fail to conform with United States practice. The claims have been reviewed and amendments made providing wording and terms which are clear and definite to one skilled in the art. Applicant submits that the claims now define terms which meet the requirements of the second paragraph of 35 USC §112. The specification has also been reviewed and amendments have been made to correct typographical errors and to provide a better understanding of the invention. No new subject matter has been added to the specification and claims.. Support for addition of the intermediate layer in Claim 6 is found in the specification at page 38, line 2 through page 40 line 25. Support for the resin used to form the uppermost layer is found on Page 37 lines 2 to 9.

Claims 6-20 have been rejected under 35 USC §103(a) as being unpatentable over EP 0767077A1.

The Examiner states that the European reference discloses a transfer sheet for an adhesive layer which comprises a substrate sheet 2, and adhesive layer 3 located on the substrate sheet, and an interposing layer 4 on the adhesive layer, which structure is believed to be all that is required for the present claims. The Examiner further states that the dependent claims express well-known elements in the art and are clearly taught by the European reference. In addition, the Examiner rejects the same claims under 35 USC 103(a) as being unpatentable over either Japanese Abstract No. 04078599 or 07052522. In the Japanese references, the Examiner notes that the laminated structure discloses Applicant's claimed invention.

As presented, Claim 6 comprises the following features:

- 1) an adhesive layer transfer sheet comprising at least a substrate sheet and a transferring adhesive layer formed to be separable on said transfer sheet;

2) the transferring adhesive layer comprises at least three layers, an uppermost layer, an intermediate layer, and a basement layer, arranged such that the uppermost layer is located at the furthest portion from the substrate sheet, the basement layer is located at a closest portion from the substrate sheet and the intermediate layer is located between the uppermost layer and the basement layer;

3) the uppermost layer has adhesive properties suitable for the receptor layer of the intermediate transfer recording medium and is formed of a resin having a glass transition temperature of not less than 60°C;

4) the basement layer has an adhesive property suitable for a surface of a transfer-receiving material and is formed of a different material from the material of the uppermost layer.

The uppermost layer should be an adhesive to the receptor layer of the intermediate transfer recording medium having an image formed by heat transferring of a sublimation dye, such materials effecting adversely to the transferred image on the receptor layer to avoid blurring and illegibility. The blurring of the image is usually caused when the sublimation dye is spread in a resin in a manner to cause each dot in the image to become a larger size than the original size of the initial formation of the image. This adverse effect does not occur with the claimed invention because the resin used in the claimed invention has on the uppermost layer a glass transition temperature of not less than 60°C.

In contrast, the basement layer should be an adhesive to the transfer receiving material which is usually natural paper, for example plain paper, which has a low melting point and is easily permeable. On this layer, it is not necessary to have the glass transition temperature higher than 60°C as in the uppermost layer. It should be noted that materials suitable for use in the basement layer should not be used for the uppermost layer because of the danger of having blurring occur in the transferred image as previously stated.

In normal conditions, the two layers comprising the uppermost layer and the basement layer would be sufficient to provide the desired results. Under more severe conditions wherein the transfer receiving material is subject to storage temperature higher than 60°, blurring of the image may occur but for the use of an intermediate layer.

It is emphasized that the occurrence of blurring on the transferred image can be avoided when an intermediate layer is arranged between the uppermost layer and the basement layer as claimed in the present invention.

There is no teaching or suggestion in the European or Japanese references with respect to the intermediate layer which is disposed between the uppermost layer and the basement layer of the transferring adhesive layer in the adhesive layer transfer sheet. The European reference discloses an intervening layer 4 on an adhesive layer 3, however, the intervening layer 4 is not between the two adhesive layers, as shown in Fig. 1. In Fig. 12 of the European reference, there is a disclosure of an adhesive layer being divided into two layers, however, there is no reference to an intermediate layer to be disposed between the divided two adhesive layers in the Fig. 12 or the reference.

It is respectfully submitted that the European and Japanese references do not teach or suggest the presently claimed invention. Applicant submits that the presently claimed invention meets the requirements of 35 USC §112 and 103. Therefore, an early Notice of Allowance of the above-identified application is respectfully requested.

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Date

Respectfully submitted,



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Jiro Onishi et al.)
SERIAL NO: 09/909,300) Group Art Unit: 1771
FILED: July 19, 2001) Examiner: D. Zirker
TITLE: Method for Forming Printed Product

THE ASSISTANT COMMISSIONER FOR PATENTS
Washington, D.C. 20231

MARKED VERSION OF AMENDED CLAIMS

6. An adhesive layer transfer sheet used for transferring a transferring adhesive layer onto a receptor layer of an intermediate transfer medium, comprising at least a ^{sep}substrate sheet and ~~a-the~~ transferring adhesive layer formed on the separable substrate sheet, ~~to be separable, and using in order to transfer the transferring adhesive layer on a receptor layer of an intermediate transfer recording medium, in which~~

the transferring adhesive layer ~~comprises~~ comprising at least an uppermost layer having an adhesive property suitable for the receptor layer of the intermediate transfer recording medium and arranged at a farthest portion from the substrate sheet, formed of a resin having the glass transition temperature of not less than 60°C, and a basement layer having an adhesive property suitable for a surface of a transfer-receiving material, formed of a different material from a material of the uppermost layer, and arranged at a closest portion from the substrate sheet, and further, an intermediate layer is formed between the uppermost layer and the basement layer.

8. An adhesive layer transfer sheet according to claim 6, wherein the basement layer is contained contains an ionomer.

9. An adhesive layer transfer sheet according to claim 7, wherein the basement layer contains an ionomer.

10. An adhesive layer transfer sheet according to claim 8, wherein the basement layer containing an ionomer is connected to the uppermost layer via an intermediate layer.

11. An adhesive layer transfer according to claim 9, wherein the basement layer containing an ionomer is connected to the uppermost layer via an intermediate layer.

15. An adhesive layer transfer sheet according to claim 6, wherein:

the adhesive layer transfer sheet further comprises at least one coloring material layer selected from the group consisting of sublimation dye layers having various colors and heat fusible ink layers having various colors, and the transferring adhesive later, ~~and these the~~ layers are formed so as to be laterally arranged them along the surface of the substrate sheet,

each coloring material layer is formed as the plane shape and size ~~not to be wasted and~~ to fit an individual image forming area allotting on a surface of the transfer-receiving material on which the image is transferred and formed by using the intermediate transfer recording medium without wasting the coloring material, and

the transferring adhesive layer is formed as the plane shape and size ~~not to be wasted and~~ to fit a receptor layer transfer area of a surface of the transfer-receiving material, without wasting the transferrinn-receiving material.

16. An adhesive layer transfer sheet according to claim 7, wherein:

the adhesive layer transfer sheet further comprises at least one coloring material layer selected from the group consisting of sublimation dye layers having various colors and heat fusible ink layers having various colors, and the transferring adhesive later, and these layers are formed so as to be laterally arranged them along the surface of the substrate sheet,

each coloring material layer is formed as the plane shape and size ~~not to be wasted and~~ to fit an individual image forming area allotting on a surface of the transfer-receiving material, on which the image is transferred and formed by using the intermediate transfer recording medium without wasting the coloring layer, and

the transferring adhesive layer is formed as the plane shape and size ~~not to be wasted and~~ to fit a receptor layer transfer area of a surface of the transfer-receiving material without wasting the transfer-receiving material.

18. A printed product ~~comprises~~ comprising at least a transfer-receiving material, a transferring adhesive layer arranged on the transfer-receiving material, and a receptor layer bearing an image arranged on the transferring adhesive layer, in which

the transferring adhesive layer comprises at least an uppermost layer having an adhesive property suitable to the receptor layer and adhering to the receptor layer, and a basement layer formed of a different material from a material of the uppermost layer, having an adhesive property suitable to the transfer-receiving material, and adhering to the transfer-receiving material.

19. A printed product according to claim 18, wherein the transfer-receiving material is a ~~nature~~ natural paper having a smoothness of 10-1500 seconds to Bec's Smoothness.